INDEX TO VOLUME 6

AUTHORS

A

Agreda, V. H. 214
Albright, M. A. 12
Anderson, R. F. 171

B

Bailey, Donald M. 125
Ballard, Don 112
Bassler, Edwin 197
Baria, B. N. 53
Beaver, Earl R. 149
Bender, D. J. 101
Boudreaux, Clifford P. 141
Braddock, Robert L. 76
Brocoff, J. C. 239
Brown, E. C. 67
Buckham, J. A. 131

C

Casavechia, Luiz C. 33
Child, J. E. 61
Christensen, Georg 205
Coker, Terry A. 177
Cornils, Boy 20
Coughenour, Glenn E. 106
Croff, A. G. 131

D

Derr, Jr., W. R. 15
DiJulio, S. S. 91

E

Emanuel, A. S. 91
Embry, Dale 177
Eubank, Philip T. 125
Everitt, J. H. 138

F

Fang, C. S. 37

G

Garside, Peter G. 5
George, B. A. 219
Goar, B. Gene 71, 84
Goldfarb, A. S. 131
Goldstein, A. M. 67
Graham, Tommy E. 149
Griskey, Richard G. 165
Gupta, S. R. 239

H

Hack, John 81
Hall, Kenneth R. 125
Hanke, T. Dione 222
Hankinson, R. W. 99, 177
Hansel, James G. 44
Hasan, A. R. 53
Hashemi, Moshen H. 183
Heiman, M. S. 219
Heinzelmann, F. J. 67
Hess, Fernando E. 177
Hilton, Michael F. 25
Holm, John 187
Holste, James C. 125

J

Janssen, Harry R. 222
Johannessen, Thorbjorn 149
Jones, E. E. 138

K

Kimble, James B. 226
Kleinau, Jurgen H. 211
Klingbiel, Ward J. 106
Kolts, John H. 226
Kvivik, Henrik 149

L

Lakey, L. T. 131
Lam, Wilfred K. 205
Langhoff, Josef 20
Lé, Q. N. 61
Lee, Gilbert D. 81
Lehmann, Bert O. 183
Lewis, William W. 141
Loos, Karl D. 168
Luther, J. E. 235

M

MacKenzie, J. S. 101
Marsh, Kenneth N. 125
Mayfield, G. G. 214
McClung, J. D. 248
McCollough, Don E. 230
Mundstock, René 33

N

Nachod, Jr., J. Ernest 200
Nicholas, David M. 25

P

Palmer, David A. 1
Polk, Mike 97
Pujado, P. R. 171

R

Radhakrishnan, R. 248
Rajagopal, Krishnaswamy 33
Roman, C. E. 235
Row, T. H. 131
Rowles, Howard C. 25
Ruprecht, Peter 20

S

Sankur, V. 91
Sapre, A. V. 61
Say, G. R. 67
Schafer, Wolfgang 20
Sellakumar, K. M. 248
Shih, S. S. 61
Siekkinen, Dan G. 155
Smith, Edwin E. 141
Smith, Jr., S. A. 37
Sperhac, Robert G. 197
Stanbridge, D. W. 239
Stern, Kenneth M. 191
Stupin, Walter J. 205

T

Thompson, W. R. 101
Thomson, George H. 99
Tracy, W. J. 15

V

Vasquez-Torres, Elena 125
Vickburg, Carl D. 177
Vines, Harvey L. 25
Vora, B. V. 171

W

Watson, Kevin D. 155
Weisenborn, Jr., W. J. 222
Wendt, C. J. 239
Wetzel, D. M. 235
White, Jr., H. J. 40

Z

Zakkay, Victor 248

INDEX TO VOLUME 6

AUTHORS

A

Agreda, V. H. 214
Albright, M. A. 12
Anderson, R. F. 171

B

Bailey, Donald M. 125
Ballard, Don 112
Bassler, Edwin 197
Baria, B. N. 53
Beaver, Earl R. 149
Bender, D. J. 101
Boudreaux, Clifford P. 141
Braddock, Robert L. 76
Brocoff, J. C. 239
Brown, E. C. 67
Buckham, J. A. 131

C

Casavechia, Luiz C. 33
Child, J. E. 61
Christensen, Georg 205
Coker, Terry A. 177
Cornils, Boy 20
Coughenour, Glenn E. 106
Croff, A. G. 131

D

Derr, Jr., W. R. 15
DiJulio, S. S. 91

E

Emanuel, A. S. 91
Embry, Dale 177
Eubank, Philip T. 125
Everitt, J. H. 138

F

Fang, C. S. 37

G

Garside, Peter G. 5
George, B. A. 219
Goar, B. Gene 71, 84
Goldfarb, A. S. 131
Goldstein, A. M. 67
Graham, Tommy E. 149
Griskey, Richard G. 165
Gupta, S. R. 239

H

Hack, John 81
Hall, Kenneth R. 125
Hanke, T. Dione 222
Hankinson, R. W. 99, 177
Hansel, James G. 44
Hasan, A. R. 53
Hashemi, Moshen H. 183
Heiman, M. S. 219
Heinzelmann, F. J. 67
Hess, Fernando E. 177
Hilton, Michael F. 25
Holm, John 187
Holste, James C. 125

J

Janssen, Harry R. 222
Johannessen, Thorbjorn 149
Jones, E. E. 138

K

Kimble, James B. 226
Kleinau, Jurgen H. 211
Klingbiel, Ward J. 106
Kolts, John H. 226
Kvivik, Henrik 149

L

Lakey, L. T. 131
Lam, Wilfred K. 205
Langhoff, Josef 20
Lé, Q. N. 61
Lee, Gilbert D. 81
Lehmann, Bert O. 183
Lewis, William W. 141
Loos, Karl D. 168
Luther, J. E. 235

M

MacKenzie, J. S. 101
Marsh, Kenneth N. 125
Mayfield, G. G. 214
McClung, J. D. 248
McCollough, Don E. 230
Mundstock, René 33

N

Nachod, Jr., J. Ernest 200
Nicholas, David M. 25

P

Palmer, David A. 1
Polk, Mike 97
Pujado, P. R. 171

R

Radhakrishnan, R. 248
Rajagopal, Krishnaswamy 33
Roman, C. E. 235
Row, T. H. 131
Rowles, Howard C. 25
Ruprecht, Peter 20

S

Sankur, V. 91
Sapre, A. V. 61
Say, G. R. 67
Schafer, Wolfgang 20
Sellakumar, K. M. 248
Shih, S. S. 61
Siekkinen, Dan G. 155
Smith, Edwin E. 141
Smith, Jr., S. A. 37
Sperhac, Robert G. 197
Stanbridge, D. W. 239
Stern, Kenneth M. 191
Stupin, Walter J. 205

T

Thompson, W. R. 101
Thomson, George H. 99
Tracy, W. J. 15

V

Vasquez-Torres, Elena 125
Vickburg, Carl D. 177
Vines, Harvey L. 25
Vora, B. V. 171

W

Watson, Kevin D. 155
Weisenborn, Jr., W. J. 222
Wendt, C. J. 239
Wetzel, D. M. 235
White, Jr., H. J. 40

Z

Zakkay, Victor 248

TITLES

A

Application of Coal-Firing to Refinery Process Heaters, The . 101
Application of Shipyards Modular Construction Techniques to Other Industrial Projects, The 141

B

Beneficiation of Texas Lignite .. 138
Boiler Heat Transfer Considerations in Oxygen-Enriched Coal-Water Slurry and Pulverized Coal Combustion ... 44

C

Central Basin Pipeline, A CO_2 System in West Texas, The 230
Cleaning of the Ocean Floor Near Offshore Platforms in the Gulf Coast 37
Coal-Fired Fluid-Bed Cogeneration 211
Cooperative Physical Property Research Through DIPPR .. 1
COSTALD for Custody Transfer of NGL 99
Coupling Test Program Results in Reduced Pump Vibration, Fewer Pump Repairs 97
Cyrogenic Hydrogen Purification for Refiners 25
Cut Energy, Chemical and Corrosion Costs in Amine Units 112

D

Dearsenation of Shale Oil With Low Hydrogen Consumption 61
Design and Operating Experience of Amoco's Bravo Dome Facility 219
Dynamic Simulation: Design Tool for High Pressure Relief Systems 183

E

Eastman Chemical Process for Acetic Anhydride from Coal, The 214
Economics of Energy Conservation In The Chemical and Petrochemical Industries ... 200
Energy Functions for Pure CO_2 . 125
Engineering Applications to Personal Computers 177
Estimation of Properties of Coal Liquids 235

F

Finding Chemical Engineering Information With The API Database 81
Future Impact of Oil Shale and Tar Sand on World Oil Production, The 165

I

Improving Profitability of the Delayed Coking Process 222
Inert Gas Generation Systems for Offshore Platforms 149

K

KILnGAS Process for Producing Clean Gas from High-Sulfur Coal: Major Technical Accomplishments and Plans ... 5

M

Moderate Pressure Hydrocracking of Heavy Vacuum Gas Oils 15

N

New FLEXSORB Gas Treating Technology for Acid Gas Removal 67

O

Oleflex: C_2-O_5 Dehydrogenation Updated 171
Oxidative Coupling of Methane to Higher Hydrocarbons 226

P

Petrochemical Strategies for The 90's 168
Process Screening and Selection for Refinery Acid Gas Removal Processing 239

R

Recent Advances in Ruhrkohle/Ruhchemie's Texaco Gasification Program 20
Recover Valuable Off-Gases by The Braun Roe Process 205
Recommendations for a U.S. Synthetic Fuels Policy 197
Recovery of Heavy Oils by CO_2 Injection 91
Reference Data for Thermophysical Properties: Direction and Research Needs 40
Review of Current and Potential Future CO_2 Sources 191

S

Sheep Mountain CO_2 Project Development and Operation 155
Small Methanol Plant Design for Use of Low Btu Gas 76
Steam/Hot Water Drying of Low Rank Coals 53
Sulfur Recovery Technology ... 71

T

Tail Gas Cleanup Process Technology 84
Thermodynamic Analysis of A Shale Oil Production Plant For Energy Conservation ... 33
Trade Association Thermophysical Research: American Petroleum Institute and Gas Processors Association 12
Turboexpanders in Energy Saving Processes 187

U

United States High-Level Nuclear Waste Management Program, The 131

V

Vertical Heat Exchanger for High Pressure Fluidized Bed Coal Combustors 248

W

Which Oxygenates Will Fill the Octane Gap? 106

SUBJECTS

A

Acetic Anhydride 214
Acid Gas 239
removal 67, 239
American Petroleum Institute 12
Amine Units 112
API Database 81

B

Beneficiation 138
Boiler Heat Transfer 44
Braun Roe Process 205
Bravo Dome Facility 219

C

Carbon Dioxide 125, 155, 171, 191, 230
Central Basin Pipeline 230
Clean Gas 5
Cleanup, Tail Gas 81
Coal
combustors 248
combustion 44
fired 101, 211
high sulfur 5
low rank 53

pulverized 44
water slurry 44
Cogeneration 211
Computers 177
COSTALD 99
Costs
corrosion 112
energy 112
Coupling, Oxidative 226
Cryogenic 25

D

Data
physical property 1
reference 40
Database, API 81
Dearsenation 61
Dehydrogenation 171
Delayed Coking Process 222
Design 219
methanol plant 76
tool 183
DIPPR 1
Drying 53
Dynamic Simulation 183

E

Eastman Chemical Process 214
Energy
costs 112
conservation 33, 200
functions 125
saving 187

F

FLEXORB Technology 67
Fluid-Bed Cogeneration 211
Fluidized-bed 248
Fuel, Synthetic 197

G

Gas
acid 67, 239
Btu 76
clean 5
generation 149
gasification program 20
oil 91
Processors Association 12
tail 84
treating technology 67
GPSC Task Force 131, 197
Gulf Coast 37

H

Heat
exchanger 248
transfer 44
Heaters, Refinery Process 101
High Pressure 183
High Sulfur Coal 5
Hydrocarbons 226
Hydrocracking 15
Hydrogen 61
purification 25

I

Industrial Projects 141
Inert Gas Generation 149
Injection, Carbon Dioxide 91

K

KILnGAS Process 5

L

Lignite 138
Liquid Density Correlation 99
Low Btu Gas 76
Low Hydrogen Consumption 61
Low Rank Coals 53

M

Management, Nuclear Waste 131
Methane 226
Methanol 76
Modular Construction 141

N

Nuclear Waste 131

O

Ocean
cleaning 37
floor 37
Octane 106
Off-gases 205
Offshore Platforms 37, 149
Oil
production 165
shale 165
Oleflex 171
Operative Experience 219
Oxidative Coupling 226
Oxygenates 106

P

Petrochemical
industries 200
strategies 168
Physical Property 1
Pipeline, Central Basin 230
Plant 33
methanol 76
Process
screening 239
technology 81
Pulverized Coal 44
Pump
repairs 97
vibration 97
Purification 25

R

Recovery, Heavy Oil 91
Reference Data 40
Refiners 25
Refinery 239
process heaters 99
Relief Systems 183
Research
physical property 1
needs 40
thermophysical 12

S

Screening, Process 239
Shale, Oil 33, 61
Sheep Mountain Project 155
Shipyards 141
Slurry 44
Steam/Hot Water Drying 53
Sulfur 71
Synthetic Fuels 197

T

Tail Gas Cleanup 84
Tar Sands 165
Test Program 97
Thermodynamic 33
Thermophysical Properties 40
Turboexpanders 187

V

Vibration, Pump 97

W

World Oil Production 165